

IN THE CLAIMS:

Please AMEND claim 1, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1. (Currently Amended) A projection exposure apparatus, comprising:

a continuous emission excimer laser for providing laser light having a predetermined wavelength;

an illumination optical system for illuminating a pattern of a reticle with ~~laser light having the predetermined wavelength~~ the laser light from the continuous emission excimer laser;

a projection optical system for projecting the illuminated pattern of the reticle onto a substrate, wherein said projection optical system is provided by a lens system made of a substantially single glass material;

a laser for injecting light having the predetermined wavelength into a resonator of said continuous emission excimer laser;

a wavemeter for measuring the wavelength of the laser light from said continuous emission excimer laser; and

changing means for changing a resonator length of said continuous emission excimer laser on the basis of a signal from said wavemeter so that the wavelength of the laser light from said continuous emission excimer laser becomes equal to the predetermined wavelength.

2. (Previously Presented) An apparatus according to Claim 1, wherein said laser comprises a pulse emission excimer laser, said apparatus further comprises a wavemeter for measuring the wavelength of light from said pulse emission excimer laser, and a band narrowing element in a resonator of said pulse emission excimer laser is actuated on the basis of a signal from said wavemeter so that the wavelength of said pulse emission excimer laser becomes equal to the predetermined wavelength.

3. (Cancelled)

4. (Previously Presented) An apparatus according to Claim 1, wherein said changing means includes at least one of shifting means for shifting a mirror in said resonator and pressure changing means for changing a pressure of an excitation gas.

5. (Previously Presented) An apparatus according to Claim 1, wherein the reticle is illuminated with slit-like light having one of a rectangular shape and an arcuate shape, and wherein said apparatus further comprises scanning means for scanningly moving the reticle and the substrate relative to the slit-like light and to said projection optical system such that the substrate is exposed to the pattern of the reticle.

6. (Original) An apparatus according to Claim 1, wherein the half bandwidth of the wavelength spectrum of the laser light is not greater than 0.1 pm, and an image of a linewidth of 0.13 micron can be produced.

7. (Original) An apparatus according to Claim 1, wherein the half bandwidth of the wavelength spectrum of the laser light is not greater than 0.08 pm, and an image of a linewidth of 0.09 micron can be produced.

8. (Previously Presented) An apparatus according to Claim 1, wherein said excimer laser is an ArF excimer laser, and wherein the glass material is SiO₂.

9. (Previously Presented) An apparatus according to Claim 1, wherein said excimer laser is an F₂ excimer laser, and wherein the glass material is one of CaF₂, BaF₂ and MgF₂.

10. (Previously Presented) An apparatus according to Claim 1, wherein said lens system includes lens elements of a number not less than ten, and wherein a first one or first two lens elements of the lens system in an order from the substrate side are made of one of CaF₂, BaF₂ and MgF₂.

11. (Original) A device manufacturing method comprising the steps of:

exposing a substrate to a device pattern by use of a projection exposure apparatus

as recited in Claim 1; and

developing the exposed substrate.